CLAIMS

1. A composite drive shaft comprising:

a cylindrical shaft body;

plurality of features, said features perpendicular to the axis of said cylindrical shaft body, said features comprising a head piece and an anchor piece; and

composite fibrous material extending around said shaft body and said features to secure said features to the shaft body.

2. The composite drive shaft of claim 1, wherein said features further comprise metallic material.

3. The composite drive shaft of claim 1, wherein the shape of said head piece of at least one feature is selected from the group of: pins, studs, fasteners, and ring members.

4. The composite drive shaft of claim 1, wherein at least one of said anchor pieces further comprise a pin.

5. The composite drive shaft of claim 1, wherein at least a portion of said anchor piece further comprises at least one selected from the group of: hook, fin, screw threading, or knurled edges.

6. A method for making a composite drive shaft, said method comprising the steps of:

providing an elongated, cylindrical mold;

applying a first layer of composite fibrous material circumferentially around said mold;

inserting at least one feature radially through the first layer of composite fibrous material, said features comprising a head piece and an anchor piece;

applying a second layer of composite fibrous material over said first layer of composite fibrous material and at least one feature;

consolidating the drive shaft; and

removing the cylindrical mold from the drive shaft.

7. The method of claim 6, wherein said cylindrical mold further comprises at least one receiving groove.

8. The method of claim 7, wherein said anchor piece of said features is inserted into said receiving grooves.

9. The method of claim 8, wherein said step of applying a first layer of composite fibrous material further comprises the steps of:

providing one or more sheets of a preimpregnated resinous composite fibrous material; and

wrapping said sheets around said mold and any layers that may be underneath them.

10. The method of claim 8, wherein said step of applying a second layer of composite fibrous material further comprises the steps of:

providing one or more sheets of a preimpregnated resinous composite fibrous material; and

wrapping said sheets around said mold and any layers that may be underneath them.

11. The method of claim 8, wherein the shape of at least one feature is selected from the group of: pins, studs, fasteners, and ring members.

12. The method of claim 8, wherein the shape of at least one feature is a ring shape, and said feature is placed circumferentially equidistant around the shaft.

13. The method of claim 8, wherein said step of insertion of at least one feature further comprises: manually pushing said feature into the first layer of composite fibrous material.

14. The method of claim 8, wherein said step of insertion of at least one feature further comprises: using a mechanical device to push said feature into the first layer of composite fibrous material.

15. The method of claim 8, wherein said step of consolidation of the drive shaft further comprises utilizing at least one method from the group of: curing, shrink-wrapping, vacuum-bag consolidating, bladder mold pressurizing, or female-mold pressurizing.

16. The method of claim 8, wherein said at least one feature further comprises metallic material.

17. The method of claim 8, further comprising the step of applying an adhesive substance around the feature, prior to the application of the second layer of composite fibrous material.

18. A method for making a composite drive shaft, said method comprising the steps of:

providing an elongated, cylindrical mold, said mold defining at least one receiving groove;

inserting at least one feature radially into said receiving grooves in said mold, said feature comprising a head piece and an anchor piece;

applying a first layer of composite fibrous material circumferentially around said mold and said feature;

pushing said head piece of said feature through the first layer of composite fibrous material;

applying a second layer of composite fibrous material over said first layer of composite fibrous material and said features;

consolidating the drive shaft; and

removing the cylindrical mold from the drive shaft.

19. The method of claim 18, further comprising the step of applying an adhesive material around said feature.

20. The method of claim 19, wherein said adhesive material further comprises an epoxy-based adhesive.